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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,348	11/25/2003	Kunihito Takeuchi	Q78468	3900

23373 7590 07/16/2004

SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

COHEN, AMY R

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/720,348

Applicant(s)

TAKEUCHI ET AL.

Examiner

Amy R Cohen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/25/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 32-8 are objected to because of the following informalities:

The claim language "wherein in a case where" or "wherein even in a case where" is awkward phrasing. Examiner suggests using --wherein when--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoshino et al. (U.S. Patent No. 6,049,761).

Hoshino et al. teaches a direction indicating device (Fig. 1) comprising: a direction specifying unit (2) that detects geomagnetism to specify a direction of vehicle; a display direction determining unit (4) that determines a current display direction in consideration of historical information of the direction of vehicle specified by the direction specifying unit and a previous display direction; and a direction providing unit (5) that provides the current display direction determined by the display direction determining unit.

Hoshino et al. teaches the direction indicating device wherein the direction specifying unit repeatedly detects geomagnetism and finds a mean value of the geomagnetism during a

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sampling period and specifies a directional section to which the mean value of the geomagnetism belongs as a direction of vehicle (Fig. 10, steps 101-105).

Hoshino et al. teaches the direction indicating device wherein in a case where the current direction of vehicle specified by the direction specifying unit agrees with a previous direction of the vehicle, the display direction determining unit makes the current display direction agree with the current direction of vehicle (Col 8, line 50-Col 9, line 48 and Tables 4 and 5).

Hoshino et al. teaches the direction indicating device wherein in a case where the current direction or vehicle specified by the direction specifying unit agrees with the previous direction of vehicle, if the latest mean value of geomagnetism is within a margin region to prevent chattering at a boundary of the directional sections, the display direction determining unit makes the current display direction agree with the previous display direction, and if the latest mean value of geomagnetism is without the margin region, the display direction determining unit makes the current display direction agree with the current direction of vehicle (Col 8, line 50-Col 9, line 48 and Tables 4 and 5).

Hoshino et al. teaches the direction indicating device wherein in a case where the current direction of vehicle specified by the direction specifying unit, the previous direction of vehicle and the second previous direction of vehicle agree with each other, the display direction determining unit makes the margin region to prevent chattering at the boundary of the respective directional sections narrower (Figs. 5-7, Col 8, line 50-Col 9, line 48 and Tables 4 and 5).

Hoshino et al. teaches the direction indicating device wherein in a case where the current direction or vehicle specified by the direction specifying unit is different from the previous

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direction of vehicle, the display direction determining unit returns the margin region to prevent chattering to an original size (Col 7, line 51-Col 8, line 14).

Hoshino et al. teaches the direction indicating device wherein in a case where the current direction of vehicle specified by the direction specifying unit is different from the previous direction of vehicle, the display direction determining unit makes the current display direction agree with the previous display direction (Col 8, line 50-Col 9, line 48 and Tables 4 and 5).

Hoshino et al. teaches the direction indicating device wherein even in a case where the current direction of vehicle is different from the previous direction of vehicle, the display direction determining unit determines a traveling direction of the vehicle from the current direction of vehicle, the previous direction of vehicle, and previous display direction and if the traveling direction is constant, the display direction determining unit updates the current display direction to the traveling direction side of the vehicle by one directional section from the previous display direction (Col 8, line 50-Col 9, line 48 and Tables 4 and 5).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents disclose heading direction devices Schierbeek et al. (U. S. Patent No. 6,513,252), Woloszyk et al. (U. S. Patent No. 6,651,003), Smith (U. S. Patent No. 6,539,639), Olson et al. (U. S. Patent No. 5,761,094), Potter (U. S. Patent No. 5,488,778), Kao (U. S. Patent No. 5,440,484), Kinoshita (U. S. Patent No. 5,440,303), Takano et al. (U. S. Patent No. 5,172,322), and Gavril et al. (U. S. Patent No. 5,095,631).

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy R Cohen whose telephone number is (571) 272-2238. The examiner can normally be reached on 8 am - 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARC  
July 14, 2004



Diego Gutierrez  
Supervisory Examiner  
Tech Center 2800